

U.S. House of Representatives' Energy and Commerce Committee
Subcommittee on Energy and Air Quality
Vehicle Fuels and Technology: Next Generation

Statement of Deborah L. Morrisett

Vice President
Regulatory Affairs
DaimlerChrysler Corporation

May 24, 2006

Good afternoon. I'm Deb Morrisett, Vice President for Regulatory Affairs for DaimlerChrysler. I want to thank the chairs and distinguished Members of the Subcommittee on Energy and Air Quality for this opportunity to appear today.

I am coming before you today to describe our involvement in the development of advanced technologies for vehicles to reduce petroleum consumption and what DaimlerChrysler is doing to advance the transition to the next generation of vehicles and fuels for America.

Speaking for the Chrysler Group only, we have the most aggressive product plan in the history of our company. In 2004 we set a company record for new vehicle launches in one year with nine. This year we'll break that record by introducing 10 all-new vehicles, among which will be some of the most fuel-efficient vehicles we've ever built. Over the next five years we plan to invest \$30 billion in our product program. Over the past four years we've committed \$7.0 billion in total program investments to upgrade the flexibility and competitiveness of our manufacturing facilities to world-class levels.

These investments and our product development are essential to ensure that our company and our people can compete against global competition. We are responsible for producing products that customers want to buy and for continuing to innovate in all aspects of our business. Reducing fuel consumption is an important part of that innovation.

There are several forces shaping energy policy at a national level including "acts of God" such as hurricanes Katrina and Rita last year that exposed the fragile state of domestic oil refinement capability. Ultimately, an effective response to all of the concerns about petroleum usage includes 1) use less oil; 2) more cleanly and efficiently burn the petroleum-based fuels we do use; and, 3) find alternatives. We must do all three without adversely affecting the economy or employment in the auto and related industries.

Clearly, the federal government and auto manufacturers have leading roles to play in achieving those goals. We stand our best chance of success when we work hand-in-hand to achieve them.

Take the example of fuel cell technology. Today, hydrogen appears to be the eventual successor to fossil fuels and a long-term energy solution for our Nation. On the strength of government and industry partnerships, we've made good progress in advancing hydrogen fuel-cell technology.

DaimlerChrysler has been working on fuel cell technology for transportation utilizing hydrogen for over ten years. We have invested more than \$1 Billion in R&D and have developed five generations of vehicles (NECAR1, 2, 3, and 4, and the F-Cell). Of all manufacturers, we have the largest worldwide fleet of fuel cell vehicles—more than 100—participating in several international demonstration projects in the United States, Europe, and Asia with over 1.2 million miles of accumulated real world experience. As part of these projects, we are demonstrating the viability of the fuel cell in the entire fleet of vehicles—from small passenger cars to delivery vans to large mass transit buses.

Government-industry fuel cell partnerships are working. These partnerships will continue to be absolutely vital to providing a jumpstart to the significant investment necessary to develop fuel cell technology and a hydrogen infrastructure. It is clear that we can work together toward solving our long-term energy, environmental and national security needs. We need to expand this cooperation to find solutions to the problem of petroleum consumption in the near term as well.

DaimlerChrysler is engaged in a broad range of advanced propulsion technologies. Fuel cell vehicles are one long term focus of this technology portfolio, which also includes more efficient gasoline engines, advanced diesels, and hybrid powertrain systems. DaimlerChrysler is focused on providing the market with the ability to select the advanced propulsion technology that best fits the needs of the individual customer.

In October of 2005, DaimlerChrysler Commercial Buses North America received a contract for 500 Orion VII diesel hybrid-electric buses from New York City transport services. This is the largest order for hybrid buses in history. Orion, DaimlerChrysler's North American city bus brand, will begin deliveries in the second quarter of 2006. This is the third hybrid order in New York City for Orion complementing the prior orders of 200 units and 125 units respectively.

Orion, along with partner BAE Systems, producer of the HybriDrive® series hybrid propulsion system, is the leading brand of hybrid buses worldwide with more than 300 units in revenue service and 700 more units on order for the Toronto Transit Commission, San Francisco MUNI and now New York City Transit and MTA Bus. Trusted for their significant emissions reductions and fuel savings compared to standard diesel buses, Orion Hybrid buses also outperform conventionally powered vehicles.

Compared to standard diesel buses, the hybrid units will provide significantly better fuel economy while greatly reducing emissions: 90 percent less particulate matter, 40 percent less NOx, and 30 percent fewer greenhouse gases. Drivers will enjoy faster acceleration and customers will experience a quieter, smoother ride free of the frequent transmission shifts encountered in conventional buses.

Regarding hybrids for light duty vehicles, DaimlerChrysler, GM and BMW have recently combined efforts to develop a two-mode hybrid drive system that surpasses the efficiency of today's hybrids. The partnership will cut development and system costs while giving customers an affordable hybrid alternative that improves fuel economy. Our first use of the system will be in early 2008 with the Dodge Durango.

DaimlerChrysler has developed and implemented technologies that improve the efficiency of the current gasoline propulsion system. We must continue to enhance the gasoline combustion propulsion system since it will be the dominant choice in the market for many years to come. We offer the Multi-Displacement System (MDS) available in the HEMI in seven Chrysler Group vehicles. MDS seamlessly alternates between smooth, high fuel economy four-cylinder mode when less power is needed and V-8 mode when more power from the 5.7L HEMI engine is in demand. The system yields up to 20 percent improved fuel economy. We also recently launched a new world engine coupled with a continuously variable transmission (CVT) to further improve fuel economy and reduce emissions of the all new Dodge Caliber. We will expand the application of this technology to several additional new products starting later this year. We are also working on further development of gasoline direct-injection which considerably enhances fuel economy by closely monitoring fuel atomization.

Yet another alternative, and the one I wish to focus on in the remainder of my testimony, is the diesel engine. Modern diesels are only beginning to make inroads in the light duty fleet in the U.S. Meanwhile, diesels account for nearly 50 percent of the new car market in Europe and about two-thirds of the Chrysler and Jeep® vehicles sold in Europe in 2005. Advanced diesel technology offers up to 30 percent better fuel economy and 20 percent lower CO2 emissions when compared to equivalent gasoline engines. Modern, clean diesels are a technology that is available today and can help reduce our nation's consumption of petroleum based fuels.

According to the EPA, if we had a light-duty vehicle population that was one-third diesel, we'd save up to 1.4 million barrels of oil per day in the U.S. That's the amount of oil the U.S. currently imports from Saudi Arabia. If Chrysler Group's diesel mix in the U.S. were the same as it is in Europe, our CAFE would improve by three miles per gallon!

Last year the Chrysler Group became the first North American-based manufacturer to offer a modern diesel engine in the light duty vehicle market with our Jeep Liberty. By the way, customer demand for the diesel Liberty exceeded our expectations. Sales are almost twice our initial target.

Our sister company, Mercedes-Benz, and our competitor, Volkswagen, also offer diesels here. We expect to see other manufacturers offering diesels in the U.S. in the not too distant future as well. For 2006, DaimlerChrysler currently offers 5 models with diesel engines—the Jeep Liberty, Dodge Ram 2500 and 3500 pickups, and Mercedes-Benz E-320, ML-320, and R-320. In the next few weeks we will announce yet another diesel product for the Chrysler Group.

Also in the 2006 calendar year, DaimlerChrysler will bring to this market the cleanest and most fuel-efficient diesel technology in the world, called BLUETEC. We introduced it in a Mercedes E-Class at the North American International Auto Show in Detroit in January.

To give you a benchmark for performance, the Mercedes E320 full-size sedan, powered by a six-cylinder diesel engine, will be the cleanest diesel in the world. It delivers the torque of an eight-cylinder, 35 miles-per-gallon in real-world driving, and has the potential to meet emissions standards in all 50 states. To meet these fuel economy and stringent emission goals, it is essential that the low sulfur requirements for diesel fuel set to become effective later this year, be maintained and not delayed.

While diesel technology alone can make big strides toward helping us meet our national energy, environment, and security objectives, when you add biodiesel and other biofuels, it gets really interesting. Biofuels represent a huge opportunity to reduce our consumption of conventional petroleum-based fuel.

Designing more engines to run on biodiesel is a current objective at DaimlerChrysler. Biodiesel fuel reduces emissions of diesel vehicles and lowers petroleum consumption. Every Jeep Liberty diesel we build leaves the assembly plant in Toledo, Ohio, fueled with B5 - a renewable fuel with a 5 percent biodiesel mix derived from locally-grown soy beans. Beginning with our 2007 model year Dodge Ram, we will endorse the use of B20—a 20 percent biodiesel mix—for use by our military, government and commercial fleet customers. We believe that allowing our fleet customers to use fuel made to the current military specification will help accelerate the development and adoption of a national B20 specification for general use.

Biofuels reduce lifecycle greenhouse gas emissions, because the plants from which they're derived absorb carbon dioxide from the atmosphere during growth. Biofuels also reduce tailpipe emissions of particulates, carbon monoxide and hydrocarbons compared with conventional diesel fuel. Biofuels also support the American agricultural economy.

To support this effort, we have teamed up with the Detroit-based nonprofit NextEnergy, the nation's largest chain of biodiesel refiners, industry-leading suppliers, and local universities to conduct much needed research and field testing. We even plan to study the use of biodiesel crops as possible tools to remediate old brownfield sites.

One of the key enablers to broad acceptance of biodiesel is the establishment of a national high quality B20 fuel specification. In order for manufacturers to produce, sell, and warranty diesel vehicles for operation on biodiesel, we feel a national B20 standard is critical to us and our customers. This standard is needed, and must be designed, to allow manufacturers to endorse B20 for all of their vehicles, including the millions of diesel vehicles already on the road as well as the ones that will be built in the future.

Gas-ethanol flex-fuel is another option we need to revisit. Since 1998 the Chrysler Group has provided to customers about 1.5 million minivans, cars, SUVs and pickup trucks that are E-85 flex-fuel (a gas-ethanol mix) capable. Unfortunately, in the past,

virtually all of those vehicles ran on pure gasoline, due to the lack of an E-85 fuel infrastructure. But flex-fuels can work, when government policy gets behind them and encourages infrastructure development.

Our current product plan commits us to producing, by the 2008 model year, just under 500,000 flexible fuel vehicles annually for our U.S. fleet. That's roughly 25 percent of our production. If all of them operated on E-85 instead of gasoline, it would save 250 million gallons of petroleum per year—roughly the amount of oil we import from Libya each year. In the same timeframe we will produce over 150 thousand diesels annually that could operate on biodiesel if we have a suitable national B20 specification.

Incentives for the introduction of biofuels and E-85 FFVs should continue to help reach the "critical mass" of vehicles on the road required to help spur the necessary fuel infrastructure development. Biofuels are proof that at least part of the solution to our energy, environment and national security issues can be homegrown.

We at DaimlerChrysler, and all of the other manufacturers represented here today, are doing our part to improve existing technology, to accelerate the introduction of new technologies, and to invest in the research necessary to deliver the long-term future technologies America needs. However, the solution rests not just with auto industry action. We need action from government policy makers, the fuels industry and ultimately the American consumer. According to our computer models, full deployment of FFVs operating on E85, 10 percent ethanol in all conventional gasoline vehicles and full penetration of 20 percent biodiesel, in both the light and heavy duty diesel fleets, would lead to a reduction in U.S. demand for petroleum of 3.6 million barrels per day. We stand ready to do our part.

Thank you for your attention; I would be pleased to answer any questions the Subcommittee has.